Jewish Genetics: Abstracts and Summaries
A collection of abstracts and reviews of books, articles, and genetic studies

This section is the most comprehensive summary of Jewish genetic data. In recent years, advances in genetic technology and the broadening in scope of genetic studies to encompass more ethnic groups have allowed scientists to come to more accurate conclusions. Nevertheless, not all questions have been answered fully, and followup studies are necessary. At the present time, it is known that Eastern European Jews have a significant Eastern Mediterranean element which manifests itself in a close relationship with Kurdish, Armenian, Palestinian Arab, Lebanese, Syrian, and Anatolian Turkish peoples. This is why the Y-DNA haplogroups J and E, which are typical of the Middle East, are so common among them. At the same time, there are traces of European (including Western Slavic) and Khazar ancestry among European Jews. Ethiopian Jews mostly descend from Ethiopian Africans who converted to Judaism, but may also be related to a lesser extent to Yemenite Jews. Yemenite Jews descend from Arabs and Israelites. North African Jewish and Kurdish Jewish paternal lineages come from Israelites. Additional research is necessary, and it will certainly take several more years to sort it all out. What we can say for sure is that Jewish Y-DNA tends to come from the Middle East, and that studies that take into account mtDNA show that many Jewish populations are related to neighboring non-Jewish groups maternally. All existing studies fail to compare modern Jewish populations' DNA to ancient Judean DNA and medieval Khazarian DNA, but in the absence of old DNA, comparisons with living populations appear to be adequate to trace geographic roots.

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1

Studies of Jewish Populations

Advanced genetic testing, including Y-DNA and mtDNA haplotyping, of modern Jewish communities around the world, has helped to determine which of the communities are likely to descend from the Israelites and which are not, as well as to establish the degrees of separation between the groups. Important studies archived here include the University College London study of 2002, Ariella Oppenheim's study of 2001, Ariella Oppenheim's study of 2000, Michael Hammer's study of 2000, Doron Behar's study of 2008, and others.

Key findings:

The main ethnic element of Ashkenazim (German and Eastern European Jews), Sephardim (Spanish and Portuguese Jews), Mizrakhim (Middle Eastern Jews), Juhurim (Mountain Jews of the Caucasus), Italqim (Italian Jews), and most other modern Jewish populations of the world is Israelite. The Israelite haplotypes fall into Y-DNA haplogroups J and E.

Ashkenazim also descend, in a smaller way, from European peoples such as Slavs and Khazars. The non-Israelite Y-DNA haplogroups include Q (typically Central Asian) and R1a1 (typically Eastern European).

Dutch Jews from the Netherlands also descend from northwestern Europeans.

Sephardim also descend, in a smaller way, from various non-Israelite peoples.

Georgian Jews (Gruzinim) are a mix of Georgians and Israelites.

Yemenite Jews (Temanim) are a mix of Yemenite Arabs and Israelites.

Moroccan Jews, Algerian Jews, and Tunisian Jews are mainly Israelites.

Libyan Jews are mainly Israelites who may have mixed somewhat with Berbers.

Ethiopian Jews are almost exclusively Ethiopian, with little or no Israelite ancestry.

Bene Israel Jews and Cochin Jews of India have much Indian ancestry in their mtDNA.

Palestinian Arabs are probably partly Israelite.

2

Studies of Cohens and Levites

Click the link above to see studies and commentaries related to Y-DNA tests of Cohens and Levites.

Key findings:

The Cohen Modal Haplotype is found among many Jewish populations of the world, including Ashkenazim, Sephardim, and the Bene Israel of India.

The Cohen Modal Haplotype, which belongs to haplogroup J, was a component of the ancient Israelite population, and especially common among the Cohens (priests of the Temple in Jerusalem).

The Cohen Modal Haplotype is not exclusively found among Jews, but rather is also found among Kurds, Armenians, Italians, Palestinian Arabs, and a few other peoples.

About half of Ashkenazic Levites possess Eastern European non-Israelite haplotypes belonging to the R1a1 haplogroup. This is almost never found among Sephardic Levites, and may have been introduced into the Ashkenazic Levite lines by Slavs or Khazars who converted to Judaism.

3

Studies on Jewish Genetic Diseases

This section has studies and commentaries related to Jewish genetic diseases such as Mediterranean Fever, Tay-Sachs, and pemphigus vulgaris. Learn about their geographical and ethnic diffusion, and what this often tells us about the degree of closeness between Jews and certain non-Jewish ethnic groups like Iranians, Anatolian Turks, and Palestinian Arabs.

Key findings:

The 185delAG breast cancer mutation is found among both Ashkenazim and Moroccan Jews.

A mutation causing Factor XI Deficiency is found among both Ashkenazim and Iraqi Jews.

One form of the gene causing Familial Mediterranean Fever is found among Ashkenazim, Iraqi Jews, Druzes, and Armenians. Another form of the gene is found among Iraqi Jews, North African Jews, and Armenians. Some Sephardim, Arabs, and Anatolian Turks also have the gene.

Gaucher Disease is found among both Ashkenazim and some Europeans.

The mutation DFNB1, which causes deafness, is found among both Ashkenazim and Palestinian Arabs.

The pemphigus MHC susceptibility gene is found among both Ashkenazim and Iranians.

The protective CCR5-D32 allele may have been introduced into the Ashkenazic population by Khazars.

4

Studies that test the potential Israelite ancestry of certain non-Jewish populations

This is a section related to the ancestry of such groups as the Samaritans, Lembas, and American Latinos of the southwest.

Key findings:

Samaritans are descended from Israelite men and Assyrian women.

Those Lembas who possess the Cohen Modal Haplotype have Middle Eastern ancestry, possibly Jewish Cohen. The Buba clan is especially Middle Eastern in its paternal DNA.

Many Spanish-speaking Latinos of the American Southwest are descended from Anusim (Spanish Jews who were forced to convert to Catholicism).

The Mizo people of northeastern India, the self-styled "B'nei Menashe", have no proven genetic connection to the Israelites.

Miscellaneous studies

David Derbyshire. "Gene helps Jews resist alcoholism." The Daily Telegraph (U.K., September 17, 2002). Excerpts:

"A study has shown that a genetic mutation carried by at least a fifth of Jews appears to protect against alcoholism. The same inherited trait is fairly common in Asian people, but is much rarer in white Europeans.... The study's author, Dr Deborah Hasin, from Columbia University and New York State Psychiatric Institute, said: 'This finding adds to the growing body of evidence that this genetic variation has a protective effect against alcoholism among Jewish groups.' The mutation, called ADH2*2, is involved in the way the body breaks down alcohol in the bloodstream.... Almost all white Europeans lack the ADH2*2 variation.... Past research has shown that the variant is found in 20 per cent of Jewish people. Those with the variant tend to drink less frequently, consume less alcohol overall or have more unpleasant reactions to drink. The new study, published today in the journal Alcoholism: Clinical and Experimental Research, looked at the relationship between the gene variant and alcoholism among 75 Israeli Jews aged 22 to 65."

Avenues for further exploration

There are known skeletons of Khazars from the Don-valley (Sarkel, Semikarakovskoye, etc.) and from the Crimea (e.g., Sudak). It is important to note that Khazarian skeletons and North Caucasian Turks have not yet been used to compare Jewish genes with likely traces of the Khazars. Thus, the Khazar theory has not really been put to the genetic test yet. Some historians and scientists are starting to recognize the need for specifically testing the Khazar theory, rather than generalizing based on studies of other non-Khazar populations:

"Still more, it has been resolved to put bones found in those sites through genetic testing. DNA studies... will reveal the mystery of the ghost ancestor..." - "El fantasma de los jázaros" by Alicia Dujovne Ortiz, in La Nación (Buenos Aires, Argentina), August 14, 1999 issue, Opinion section.

"Certain scholars in addition appear much to await genetic tests of the DNA of the bones taken for the study of the migrations and the authentication of the sites." - "L'histoire retrouvée des Khazars" by Nicolas Weill, in Le Monde (France), July 9, 1999 issue, page 12.

The DNA of the Crimean Karaites and Egyptian Karaites remain to be studied on a large-scale basis. Small-scale testing of Crimean Karaites occurred during the years 2005 and 2006 and the results were published in the 2nd edition of The Jews of Khazaria in October 2006. One more Crimean Karaite sample was tested later.

Bennett Greenspan, a colleague of geneticist Dr. Michael Hammer, has established Family Tree DNA Genealogy by Genetics, Ltd. to investigate the roots of European Jews and family genealogies. Visit his site to see if you may benefit from their services. This site is an affiliate.

After you've been tested for Y-DNA by a lab like Family Tree DNA, Ybase: Genealogy by Numbers allows you to compare your genotype with another large database to find people who may be related to you. Also check out another public database of haplogroups, Ysearch.org, which also allows comparisons with other people.

The website Genetics and Human Migration Patterns was recommended to me.

Aish HaTorah exposes the myth of a separate Jewish race: "Jews are not a race. Anyone can become a Jew - and members of every race, creed and color in the world have done so at one time or another. There is no distinguishing racial physical feature common only to Jews."

About.com also exposes the myth: "Being Jewish is not a race because Jews do not share one common ancestry or biological distinction. People of many different races have become Jewish people over the years."

Rabbi Harold M. Schulweis explains the nature of Judaism: "One of the unique aspects of Judaism is its rejection of Judaism as a biological entity, an inherited spiritual DNA, racial or ethnic. The point is that being a Jew is not a matter of genes and chromosomes. To the contrary, Judaism is the first religion to recognize the 'ger', the stranger who chooses to identify himself with Judaism. Judaism is not rooted in race or clan or in a genetic matter but a religious tradition of choice."

The answer is that Jews are a religion and a civilization, but not a race or singular ethnic group (the latter two definitions marginalize proselytes). As Rabbi Rami Shapiro said: "There is only one response to Who is a Jew? that works: A Jew is one who takes Judaism seriously. One who takes Judaism seriously studies it, argues with it, and lives it." The proper name of the separate ethnic group that most Jews descend from is Israelite.